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Paper 7
Date: June 11, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,
Petitioner,

v.

ONE-E-WAY, INC.,
Patent Owner.

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IPR2021-00284
Patent 10,468,047 B2

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Before GEORGIANNA W. BRADEN, ROBERT J. WEINSCHENK, and RUSSELL E. CASS, *Administrative Patent Judges*.

WEINSCHENK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
*35 U.S.C. § 314*

# I. INTRODUCTION

## *A. Background and Summary*

Apple Inc. ("Petitioner") filed a Petition (Paper 3, "Pet.") requesting an *inter partes* review of claims 1–16 ("the challenged claims") of U.S. Patent No. 10,468,047 B2 (Ex. 1101, "the '047 patent"). One-E-Way, Inc. ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp.") to the Petition.

An *inter partes* review may not be instituted unless "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). We determine Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that at least one of the challenged claims of the '047 patent is unpatentable. Accordingly, the Petition is denied, and no trial is instituted.

## *B. Real Parties in Interest*

Petitioner states "Apple Inc. . . . and its wholly-owned subsidiary Beats Electronics, LLC ('Beats') are the real parties-in-interest to this *inter partes review*." Pet. 1. Patent Owner states "[t]he real party in interest is One-E-Way, Inc." Paper 5 (Patent Owner's Mandatory Notices), 1.

## *C. Related Matters*

The parties identify the following district court case involving the '047 patent: *One-E-Way, Inc. v. Apple Inc.*, Case No. 2:20-cv-06339 (C.D. Cal.). Pet. 1; Paper 5, 1.

Petitioner also identifies a prior ITC investigation in which Patent Owner alleged infringement of related patents against a number of

respondents: *In re Certain Wireless Headsets*, Investigation No. 337-TA-943 (the "ITC investigation"). Pet. 1. According to Petitioner, Patent Owner's original complaint named Beats as one of the respondents, but Patent Owner subsequently moved to withdraw its allegations against Beats, and the ITC investigation was terminated as to Beats. *Id.* at 1–2. Petitioner further states that, during the course of the ITC investigation, the ITC issued a claim construction ruling (the "ITC Claim Construction Order"). *Id.* at 2.

Patent Owner additionally identifies four petitions for *inter partes* review against patents related to the '047 patent: IPR2021-00283, IPR2021-00285, IPR2021-00286, and IPR2021-00287. Paper 5, 1.

*D. The '047 Patent*

The '047 patent relates to a wireless digital audio system including a portable audio source operatively coupled to a digital audio transmitter, and an audio receiver coupled to a headphone set. Ex. 1101, code (57). An embodiment of the system is shown in Figure 1, reproduced below:

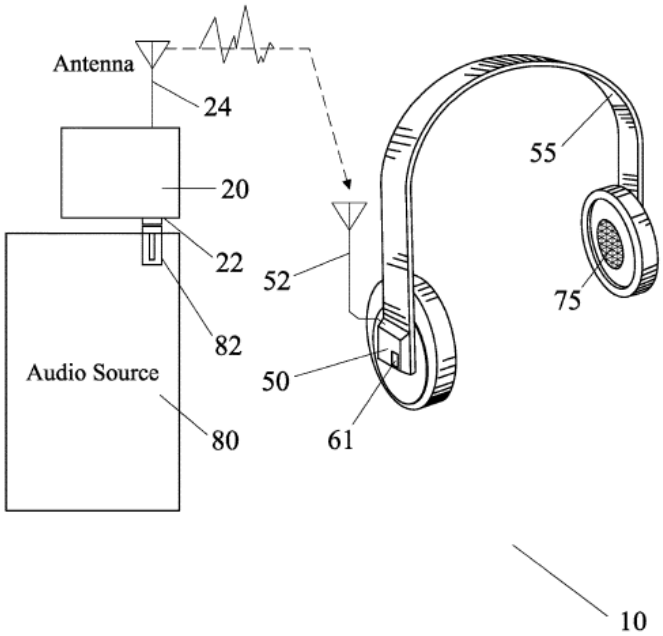


FIG. 1

*Id.* at Fig. 1. As shown in Figure 1, wireless digital audio music system 10 includes battery powered transmitter 20 connected to portable music player or music audio source 80. *Id.* at 2:36–39. Transmitter 20 is connected to music audio source 80 via analog headphone jack 82 using headphone plug 22. *Id.* at 2:39–42. Transmitter 20 has transmitting antenna 24 for transmitting a spread spectrum modulated signal to receiving antenna 52 of battery powered headphone receiver 50, which is coupled to headphones 55 including headphone speakers 75. *Id.* at 2:42–49.

The audio transmitter portion of the wireless digital audio system is shown in more detail in Figure 2, reproduced below:

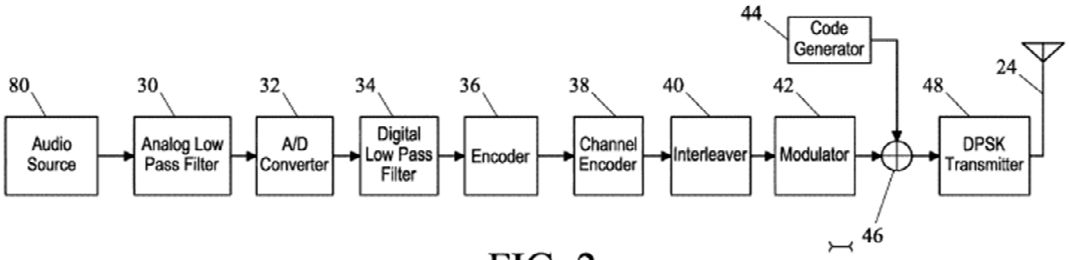


FIG. 2

*Id.* at Fig. 2. As shown in Figure 2, the audio transmitter digitizes the signal from audio source 80 using analog to digital converter ("ADC") 32, and then processes the digitized signal using digital low pass filter 34 and encoder 36. *Id.* at 2:51–55. The signal is passed through channel encoder 38 to reduce the effects of channel noise, and then modulated for transmission by modulator 42. *Id.* at 2:55–58. Code generator 44 creates a "unique user code" that is "specifically associated with one wireless digital audio system user," and "is the only code recognized by the battery powered headphone receiver 50 operated by a particular user." *Id.* at 2:60–66. The signal is then passed to spread spectrum differential phase shift key ("DPSK")

transmitter 48, which provides further noise immunity, and to antenna 24 for transmission. *Id.* at 2:58–60.

The audio receiver portion coupled to the wireless headphones is shown in more detail in Figure 3, reproduced below:

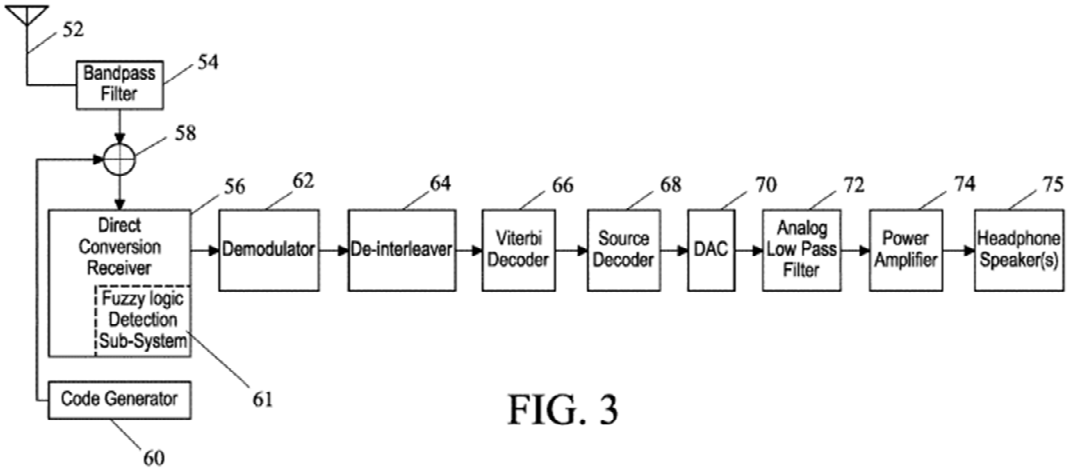


FIG. 3

*Id.* at Fig. 3. As shown in Figure 3, antenna 52 receives the spread spectrum modulated signal from transmit antenna 24 (Figure 2) and communicates it to wideband bandpass filter 54. *Id.* at 3:5–13. The output of bandpass filter 54 is summed with the output of receiver code generator 60, and communicated to direct conversion receiver 56. *Id.* at 3:5–11, 3:16–19. The '047 patent explains that the "receiver code generator 60 may contain the same unique wireless transmission of a signal code word that was transmitted by audio transmitter 20 specific to a particular user," and "[o]ther code words from wireless digital audio systems 10" as well as "other device transmitted wireless signals operating in the wireless digital audio spectrum of digital audio system 10" may "appear as noise to audio receiver 50." *Id.* at 3:19–26. According to the '047 patent, "[t]his code division multiple access (CDMA) may be used to provide each user independent audio enjoyment." *Id.* at 3:26–28.

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